



**CITY OF BOULDER  
OPEN SPACE BOARD OF TRUSTEES**

**MEETING DATE: August 17, 2011**

**AGENDA TITLE:** Open Space and Mountain Parks West Trail Study Area Plan:  
Alternative Trail Designs for Anemone Hill Area

**PRESENTERS**

Michael D. Patton, Director, Open Space and Mountain Parks  
James Reeder, Land and Visitor Services Division Manager  
Heather Swanson, Wildlife Biologist  
Annie McFarland, Visitor Access Program Coordinator

**EXECUTIVE SUMMARY**

The West Trail Study Area (TSA) Plan was discussed and approved by City Council on March 30, 2011. As a part of the West TSA Plan accepted by City Council there were two trails proposed for the Anemone Hill area, the Sunshine and Anemone Loops designated for pedestrian and equestrian use. These trails were to be designed for equestrian use and horses would be required to be on trail. The Anemone Loop will allow dogs under voice and sight control and the Sunshine Loop will require dogs to be on leash. See Attachment A for the relevant excerpt from the West TSA Plan.

In accepting the plan, council directed Open Space and Mountain Parks (OSMP) to also “explore possibilities for a bike loop or bike trail within the Anemone area, especially looking at a connection coming in from the Boulder Creek Path, as soon as possible.” They asked that OSMP work with stakeholders and use a third party to design any potential trail.

OSMP contracted with Design Concepts and ContourLogic to produce multi-use trail designs for the area that would include mountain bikes. On August 9 the Open Space Board of Trustees (OSBT) took a field trip to the Anemone area to better understand the design proposals and immediately afterward held a study session to review and discuss the designs in greater detail.

## **STAFF RECOMMENDED MOTION**

Staff requests OSBT consideration of this matter and action in the form of the following motion:

That the Open Space Board of Trustees recommends that City Council continue to support the trail loops as previously accepted (March 30, 2011) in the West TSA Plan including designed use for hikers and equestrians and that no additional trails be built in the Anemone Hill area.

## **COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS**

- **Environmental:** Any trail on Anemone Hill will have a negative impact on the environment on that hill though these effects can be mitigated by restoring many of the social trails that exist on the hill. Any trail alignment considered should intrude into Highly Suitable Habitat as little as possible. The goal of the West TSA Plan recommendations is to enhance ecological sustainability of the West TSA while providing a more sustainable network of recreational trails and protection for cultural resources found on the hill.
- **Economic:** Open Space and Mountain Parks contributes to the economic vitality goal of the city as it provides the context for the diverse and vibrant economic system that sustains services for residents. Diverse and high-quality opportunities for visitor activities in the West TSA help attract and support businesses and residents who seek such opportunities.
- **Social:** Because the Open Space land system is accessible to all members of the community, it helps support council's community sustainability goal because all residents who live in Boulder can feel a part of and thrive in this aspect of their community.

## **OTHER IMPACTS**

- **Fiscal:** The cost of trail construction, should one be built, will depend upon which alternative is chosen. The minimum cost is likely to be in the \$175,000 to \$200,000 range though some alternatives will likely cost as much as \$300,000 or more.
- **Staff time:** It will take significant staff time to accomplish the construction of any of these trail options.

## **PUBLIC FEEDBACK**

Many public comments concerning trails on Anemone were received during the West TSA planning process.

During the subsequent process of selecting a contractor to design a potential bike trail, OSMP requested input from ten stakeholder groups and individuals. Two groups responded giving their opinions of the contractors who had bid on the project.

OSMP held an open house on June 19 to allow interested people to address the contractor directly with their thoughts concerning bike and multi-use trails on Anemone Hill.

Seventeen people took advantage of this opportunity. Their comments can be reviewed in Attachment B.

The contractors delivered their suggested trail designs to OSMP on July 27. The designs were posted on the OSMP Web site (August 5, 2011) and comments were requested. Two were received prior to the field trip and study session held on August 9, 2011. OSMP will continue to receive and compile comments via internet up to the OSBT meeting on August 17. The public will be welcome to comment at the August 17 OSBT meeting on this agenda item.

Board action taken on August 17 will be posted on the OSMP Web site. OSMP will once again request input via the internet up to noon on September 5. Comments received by that time will be reported to City Council for consideration at its September 6 meeting.

The full list of comments associated with this item will be available on the West TSA Web site ([www.westtsa.org](http://www.westtsa.org)).

## **BACKGROUND**

The purpose of the Visitor Master Plan (VMP) and subsequent trail study area planning is to develop policies and management actions that maintain a physically sustainable trail system and high-quality visitor experiences consistent with the long-term sustainability of natural, agricultural, and cultural resources.

In developing the West TSA, the Community Collaborative Group (CCG), made up of community stakeholders, was impaneled to make recommendations for visitor access and environmental preservation in the 12,000-acre area immediately west of the city.

The CCG was unable to reach consensus and did not ultimately make any recommendations concerning bikes in the West TSA. However, they did recommend two multi-use, non-bike loop trails on Anemone Hill – Anemone Loop (south) and Sunshine Loop (north). The West TSA Plan did not recommend mountain biking on Anemone Hill. Staff's analysis of bike opportunities for the draft West TSA Plan and recommendations are on the West TSA Web site ([www.westtsa.org](http://www.westtsa.org)). Staff did recommend the continued pursuit of a mountain bike connection to Walker Ranch through the Eldorado Springs area and via Chapman Drive as an alternative to Flagstaff Road. Substantial progress has been made on both of these trails. While City Council accepted the CCG recommendation for the Anemone Hill area they also directed OSMP to explore possibilities for a bike loop or bike trail within the Anemone area. They also asked that staff look for a connection from the Boulder Creek Path to a bike path that could potentially be built on Anemone.

Staff supported the CCG recommendation designating two multi-use, non-bike trail loops on Anemone Hill. These loop options were developed to minimize the impacts to highly suitable wildlife habitat and rare plant occurrences. The alignments took into account many of the key destinations currently served by unsustainable and undesignated trails. Additional goals were to improve access to the area, minimize impacts to natural

resources and improve the overall visitor experience. Replacing the existing web of undesignated trails with high-quality sustainable trails would allow OSMP to improve the visitor experience and reduce ecological and aesthetic impacts. OSMP could then expect to be more successful in closure and restoration of trails in this area.

In response to the City Council directive, OSMP published a Request for Qualifications (RFQ) and a Request for Proposal (RFP) for this trail design work on June 6. Interested contractors were asked to submit their qualifications and their bids to design three trails:

1. A multi-use loop trail that is designed to maximize the mountain bikers' experience. Trail users would include both hikers and equestrians.
2. A multi-use loop trail that is designed for mountain bikers, hikers and equestrians that will generally follow the trail alignment of the south section of the CCG-proposed Anemone Trail and the north section of the CCG-proposed Sunshine Trail.
3. A multi-use loop trail that is designed for mountain bikers, hikers and equestrians. This trail is to be designed to provide a balanced experience for each of the user groups.

All designs were to include at least one access from Centennial Trailhead or Settlers Park Trailhead and an optional access to/from Boulder Creek Path if a reasonable one could be found.

Additional requirements were to:

- a) minimize intrusion into Highly Suitable Habitat and rare plant areas;
- b) stay 100 yards away from the west boundary of OSMP property to minimize user intrusion onto private property;
- c) try to minimize trail-user conflict;
- d) encourage users to stay on trail; and
- e) provide a cost estimate for construction of each alternative.

OSMP received six bids for this work. Feedback on these potential contractors was requested from stakeholders. Staff conducted an internal review of the contractors' qualifications and proposals. The partnership of Design Concepts (Axel Bishop) and ContourLogic (Scott Gordon) was awarded the contract.

A public meeting was held on July 19 in order to give all interested stakeholders the opportunity to address the contractors directly with their ideas, thoughts and concerns. Seventeen people spoke at that meeting.

The consultants have produced three alternative multi-use trail designs that would accommodate mountain bikes along with hikers and equestrians. Each design is somewhat modular so there are actually many possible combinations. An estimated construction cost analysis has also been completed. The three designs and the construction cost estimates are attached to this memo as Attachment C.

OSMP staff has analyzed these trail designs, along with the two loops presently in the West TSA Plan, for their impact on ecological resources, cultural resources, and visitor experience. These analyses can be found in Attachment D.

## **ANALYSIS**

### **Cultural resources**

While OSMP does not believe trail construction of either the contactor-proposed or the currently-approved Sunshine and Anemone loops are likely to damage cultural resources two isolated finds and the rock formations were made visible by the Dome Fire. To be certain of their significance, OSMP is in the process of hiring a United Tribes of Colorado consultant to assess the value of these cultural resources before any final alignment is determined.

### **Ecological resources (Attachment D)**

Along with the trails approved in the West TSA Final Plan, all three trail options developed by Design Concepts would confer the benefits of keeping people on designated trails and closing / restoring all of the undesignated trails. However, this area is designated as a natural area and success in keeping users on trail may be limited without additional regulatory options. Staff believes that modifications to trail alignments presented in the West TSA Final Plan may be necessary to make them more sustainable. However, these modifications are believed to be minor and any modifications would not substantially impact wildlife habitat beyond that of the original trail alignment outlined in the West TSA Final Plan (Map 4).

In recent discussions with Design Concepts, it was their opinion that modifications can be made to their original trail options (C-1, C-2, C-3) in some segments in order to have less impact. However, when compared with the trail alignments approved in the West TSA Final Plan, the Design Concepts trail options will: considerably increase overall trail density in the Anemone area (Table 1); increase habitat fragmentation in the area (Map 8), decrease habitat effectiveness for wildlife; substantially increase trail density in black bear highly suitable habitat (Tables 1, 2) by crossing between 6 and 9 additional drainages (Maps 5-7); further fragment Abert's squirrel highly suitable habitat in multiple locations (Tables 1, 3; Maps 5-7), and bisect mature forest which currently supports an accipiter nesting territory and forest-interior bird species. A description of each trail alignment's ecological benefits and impacts by trail segment is included in Attachment D.

Because of the steep terrain on the north- and south-facing slopes, trail sustainability will be a challenge. On the south-facing slopes, loose soils and extensive rock bands may lead to problems with environmental sustainability, including an increased probability of erosion and subsequent habitat disturbance. This is particularly true for the connection to Boulder Canyon, which will require multiple switchbacks and will be highly erosive. The multiple drainages on the north-facing slopes of the Anemone area are well-vegetated and establishing new trails here will impact habitat quality and effectiveness. Finally, the western half of the Anemone area contains high-quality wildlife habitat and is not currently used heavily by visitors. Therefore, it would be beneficial to the

maintenance of ecological resources to minimize future access to this back-country habitat block.

### **Visitor experience**

OSMP formed the CCG to look at the land within the West TSA and charged them with finding the best balance between trail sustainability, visitor access and natural resource protection. For the Anemone area the CCG agreed that the best balance was two separate loops with the allowed uses of hiker and equestrian. The recommendation for a designated trail system in the Anemone area influenced their recommendations for the Wittemyer and other areas.

The recommendation for two separate loop trails also met many of the goals that OSMP initially identified for the area. These goals include:

- Provide a designated trail system, with the allowed use of hiker and equestrian, in the area that could better serve visitors.
- Provide a designated loop opportunity, instead of providing dead-end trails that often result in an undesignated trail that completes a loop opportunity.
- Close and restore the extensive undesignated trail system in the area.
- Direct visitors away from the western property boundary to decrease potential for trespassing.

The proposed multi-use (including bikes) trails developed at City Council's request may also meet most of these goals. However, we also know that multi-use trails that include mountain bikes in other parts of the OSMP system have created situations where visitors have encountered conflict – generally between bikers and pedestrians. There is some evidence that this has led to pedestrians abandoning these trails leaving bikes as the majority user group. Given the nature of the terrain and the close proximity to town there is certainly a prospect for a similar result in the Anemone area.

Parking in both the Centennial and Settlers Park trailheads is already congested and will certainly increase if a new user group is added to the area. Additional users may also increase parking in nearby neighborhoods, especially during the busiest times when visitors from outlying areas are drawn to the area. Use is likely to increase by those who live and/or work close enough to walk or ride to the area. We expect that any trail will need to be built to withstand a high level of visitor use. Steep grades and highly erosive soils will add to this challenge.

No matter which trail option is chosen, as prescribed by the approved plan, OSMP remains committed to closing and restoring a large portion of the undesignated trails in this area.

### **STAFF RECOMMENDATIONS**

Providing OSMP users more opportunities to bike on Open Space land is a desire of a portion of the Boulder community. City Council asked OSMP to explore possibilities for bike use on Anemone. The contractor chosen using the city's bid process has produced three multi-use trail alternatives for staff, OSBT and City Council to review. The

alternatives are made up of several trail segments which can be connected in a large number of combinations.

Physically sustainable trails can be built on Anemone. However, due to the extreme slopes involved and erosive soils, construction of any trail will likely be expensive in order to control erosion, reduce user conflict and keep users on trail. If the trail is designed for mountain bikes, the cost is likely to be as much as 15 percent higher. In staff's analyses of these alternatives, it was determined that each had a significantly higher impact on OSMP conservation values than did the original two loop trails recommended by the CCG in the West TSA Plan.

Due to these negative impacts, staff believes the best option on Anemone is the one recommended by CCG that is in the West TSA Plan that was previously accepted by City Council.

Submitted by:

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Michael D. Patton, Director

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James Reeder, Land and Visitor Services Division Manager

Attachments:

- A. Anemone section of West TSA accepted by City Council, March 30, 2011
- B. Comments from July 19 public meeting
- C. Design Concepts trail maps and comments
- D. Staff review of alternative trail designs